

## Cumulative Index 2004

### Volume 31

January	SKIN CANCER RESTORATION, pages 1–124
April	CLEFT LIP AND PALATE, pages 125–376
July	CRANIOFACIAL RECONSTRUCTION, pages 377–522
December	ABDOMINOPLASTY, pages 523–638

Note: Page numbers of article titles are in **boldface** type.

### A

- Abdomen, classification of, 539–540
- contouring of, current methods of, evolution of, 558
  - in male, identification of aesthetic units for, 561
  - deformity of, causes of, 555
  - following massive weight loss, 611, 613
  - soft tissues of, differences in male and female, 555, 556
  - special Type I, 546–547, 550–551
  - special Type II, 547, 552
  - Type I, 539, 540, 541
  - Type II, 539, 540, 542–543
  - Type III, 540–545, 546, 547
  - Type IV, 540, 545–546, 548
  - Type V, 540, 546, 549
  - Type VI, 540, 549–550
- Abdominoplasty, aged pelvic tilt and, 524, 526
- classification of treatable layers of abdomen and, 558
  - design of, 524
  - and fashion, 539
  - for body lift, using progressive tension sutures, 588
  - full, using progressive tension sutures, 587
  - lateral-tension, and body lifts, maximizing aesthetics in, **523–538**
  - “buttock lift” effect of, 525
  - high-, design of, 524
  - dressings and postoperative care for, 528–529
  - operative technique for, 526–528, 530, 531
  - patient selection for, 525–526, 527, 528, 529
  - thigh/buttock lifts with, 529–537
  - complications of, 532–537
  - operative technique for, 530–532
  - patient selection for, 530, 533–537
  - umbilicoplasty with, 528
  - result of, 524
- lipoplasty and, based on anatomy, 540–548
- overlap of, **539–553**
  - technique of, 548–552
- liposuction for, 583
- male, **555–569**
- anesthesia for, 566–568
  - complications of, 566
  - goals of, 555
  - indications for, and techniques of, 558–559
  - intra-abdominal submuscular fat compartment and, 568
  - operative procedures for, 559–566
  - patient classification for, 557–558, 559
  - patient examination for, and diagnosis of, 557
  - postoperative patient management for, 567
  - preoperative patient management for, 567
- “marriage,” **571–581**
- operative procedure in, 574–577
  - postoperative view of, 577, 578, 579
  - preoperative evaluation and patient selection for, 571–573, 574–575
  - preoperative markings for, 572, 573–574
  - vertical plication of infraumbilical rectus muscle fascia for, 576
- minimal access subtypes of, 559
- minimal scar, skin managed in, 572
- modified, using progressive tension sutures, 586
- patient evaluation for, 523

- progressive tension sutures in, **583-589**  
    excision for, 584, 585  
    flap advancement and suture for, 584, 585  
    study of, 585-586  
    technique of, 583-585  
    technique of, 523  
    treatment strategies for, 524-525  
Type IV full, with or without liposuction,  
    indications for, 561  
    technique of, 561-565  
    unfavorable results from, 523
- Adipose tissue, abdominal, excess, suction lipectomy  
    in, 580  
    of male patient, 556
- Adolescent device, mandibular, 409-410
- Adolescents, with cleft lip and cleft palate, treatment  
    of, 352-353  
    with clefts, orthodontic treatment in, 278-283,  
        283-284, 285-286, 287-289
- Adults, facial growth in, unoperated clefts and,  
    **363-374**  
    with clefts, orthodontic treatment in, 278-283,  
        283-284, 285-286, 287-289
- Airway obstruction, in Pierre Robin neonates,  
    distraction osteogenesis in, **225-233**
- Ala, defects of, cheek flaps for reconstruction of, 97  
    following Mohs' surgery, aesthetic nasal  
        reconstruction in, 106-107  
    full-thickness defects of, chondrocutaneous grafts  
        for reconstruction of, 97  
    margin of, full-thickness defect of, bilobed flaps  
        for reconstruction of, 102-106  
    shallow defect of, bilobed flaps for reconstruction  
        of, 102, 103  
    subtotal defect of, conchal cartilage graft in,  
        101-102  
    subunit of, superiorly based nasolabial flap for  
        reconstruction of, 98
- Alpha ester compounds, 393
- Alveolar clefts. See *Cleft(s), alveolar*.
- Anesthesia, for male abdominoplasty, 566-568
- Antibiotic prophylaxis, during reconstruction of  
    upper extremity, 114
- Apert syndrome, brachycephaly and midface  
    retrusion in, 471, 472
- B**
- Back rolls, following massive weight loss, 612,  
    614, 615
- Bariatric surgery, biliopancreatic diversion in,  
    595-596  
    categories of, 605  
    for weight loss, in morbidly obese patient,  
        **591-600**  
    laparoscopic, versus open bariatric surgery, 598  
    laparoscopic adjustable gastric banding for, 594  
    major elective surgery following, 606  
    malabsorption procedures in, 605  
    mechanism of action of, 593  
    nutritional considerations for, 605-607  
    open, laparoscopic surgery versus, 598  
    patient follow-up compliance in, 598  
    preoperative blood work following, 607  
    preoperative care for, 598  
    restrictive procedures in, 605  
    Roux-en-Y gastric bypass as, 596-598  
    timing of body contouring relative to, 601-602  
    use of medications following, 604  
    vertical banded gastroplasty for, 593-594
- Baroudi's suture, 547
- Basal cell carcinoma(s), field-fire, Mohs'  
    micrographic surgery in, 13  
    Mohs' micrographic surgery in, 5, 9, 10, 11,  
        12, 13
- Bernard/Webster flap, for total lower lip  
    reconstruction, 81, 84
- Biliopancreatic diversion, mechanism of action  
    on, 595  
    method of, 595-596  
    results of, 596
- Bilobed flap(s), for aesthetic reconstruction of  
    nose, 142  
    in full-thickness alar margin defect, 102-106  
    in partial-thickness defects of nose, 98  
    in shallow defect of sidewall and ala, 102, 103
- Bioactive glass particulate, for craniofacial  
    reconstruction, 381-382
- Biomaterials, in craniofacial reconstruction, **377-385**
- Blood work, preoperative, for post-bariatric-surgery  
    patient, 607
- Body contouring, diabetes mellitus, and gastric  
    bypass, 603  
    fluid monitoring following, 607  
    outcomes of, screening and management of  
        medical issues affecting, 602-604  
    post-gastric-bypass patient presenting for,  
        perioperative management of, **601-610**  
    prevention of wound complications following,  
        607-608

- prophylaxis of deep vein thrombosis for, 604-605  
 psychosocial issues and, 603  
 timing of, relative to bariatric surgery, 601-602  
 truncal, in massive weight loss, **611-624**  
 with limited scars, mini-abdominoplasty and  
 liposuction for, **571-581**  
   discussion of, 577-581  
   operative procedures for, 574-577  
   patient selection for, 572  
   postoperative view of, 577, 578, 579  
   preoperative evaluation for, 571-573,  
     574-575  
   preoperative markings for, 572, 573-574
- Body lift(s), abdominoplasty using progressive  
 tension sutures for, 588  
 and lateral-tension abdominoplasty, maximizing  
 aesthetics in, **523-538**
- Bone, autogenous, for craniofacial reconstruction,  
 377-378  
 demineralized, for craniofacial reconstruction, 382
- Bone advancement, in midface hypoplasia, 464-471
- Bone and tissue engineering, carrier for, 390  
 for reconstruction following resection of skull  
 tumor, 388-389  
 historical background of, 387-389  
 in craniofacial reconstructive surgery, **387-392**  
 matrix of, 390-391  
 scaffold for, 390  
 stem cells and, 390  
 system of, 390
- Bone distraction, history of, 407  
 resorbable, current status and future directions in,  
**407-414**  
 resorbable materials in, 407-408
- Bone distraction devices, resorbable, 408-409
- Bone ingrowth, hydroxyapatite implants and,  
 423-424
- Bone paste, for craniofacial reconstruction, 382
- Buttocks, following massive weight loss,  
 612-613, 615
- C**
- Calcium phosphate bone cements, in cranial  
 reconstruction, 424-426
- Calvarial remodeling, in treatment of sagittal  
 synostosis, 490, 491
- Cancer, skin. See *Skin cancer(s)*.
- Cardiac disease, in obesity, assessment for gastric  
 bypass procedures, 603
- Carrier, for bone and tissue engineering, 390
- Cartilage, autogenous, for reconstruction of skin and  
 cartilage of ear, 92  
 for structural support in nasal reconstruction, 96
- Cartilage graft, in aesthetic reconstruction following  
 Mohs' surgery, 106-107
- Cheek, buccal area of, defects of, treatment of, 60,  
 63, 64, 65-66  
 defects of, following Mohs' surgery, aesthetic  
 reconstruction in, 109, 111  
 lateral area of, defects of, treatment of, 55-60  
 medial area of, defects of, treatment of, 52-55  
 reconstruction of, after ablation of skin cancer,  
**49-70**  
 skin cancer of, anatomic considerations in, 50  
 principles of treatment of, 51-52  
 zygomatic area of, defects of, treatment of, 60,  
 61-62
- Cheek flaps, for alar and sidewall defects, 97  
 in aesthetic reconstruction following Mohs'  
 surgery, 109, 111
- Child(ren), craniofacial fractures in. See *Craniofacial  
 fractures, pediatric*.  
 with cleft lip and cleft palate, treatment of,  
 350-352  
 with clefts, orthodontic treatment in,  
 275-277, 278
- Choncal cartilage graft, for delayed reconstruction  
 following surgery for recurrent cancer, 111, 112
- Chondrocutaneous grafts, for aesthetic reconstruction  
 of nose, 141  
 for full-thickness alar defects, 97
- Chondromucoperichondrial flap, in aesthetic  
 reconstruction following Mohs' surgery, 110,  
 111-112
- Chromosomal anomalies, orofacial clefting and, 135
- Cleft(s), alveolar, anatomy and pathology of,  
 305-306  
   bone-graft donor sites for, 310-311  
   cleft lip, and cleft palate, nasoalveolar molding  
     in, **151-160**  
   cleft lip with, repair of, 182-183  
   dental patterns of, 306  
   management of, **305-315**  
   orthodontic management of, 308  
   timing of repair of, 308

- treatment of, dental rehabilitation in, 313
    - innovations in, 311-313
    - objectives in, 306-308
    - surgical technique in, 308-310
    - using maxillary osteotomies, 311
  - variability in extent of, 305
  - facial. See *Facial clefts*.
  - growth and development in, monitoring of, 283-289
  - in adolescents and adults, orthodontic treatment in, 278-283, 283-284, 285-286, 287-289
  - in elementary school age children, orthodontic treatment in, 275-277, 278
  - in neonates and children, orthodontic treatment in, 275
  - in toddlers and preschool children, orthodontic treatment in, 275
  - of functional matrix, anatomy of cleft site and, 167-171
    - functional matrix insufficiency and, 164-167
    - repair of, **161-192**
      - anatomy of nose and mouth and, 163-164
      - closure sequence for, 177-180
      - dissection sequence for, 173-177
      - flap design for, 180-182
      - modifications of, 182-183
      - neuromeric model and, 161-163
      - scientific principles of, 161-171
      - surgical principles and techniques for, 171-183
  - of lip, alveolar, and palate, nasolabial molding in, **151-160**
  - orthodontic treatment for patients with, **273-292**
    - recordkeeping in, 274-275
  - poorly coordinated treatment of, problems following, 273, 274
  - prosthetic habilitation of patients with, **355-362**
    - articulation development prosthesis for, 356
    - craniofacial rehabilitation in, 360-362
    - general dental care and, 356-357
    - nasal conformer for, 356
    - palatal lift in, 358-361
    - palatal obturator for, 357-358
    - pharyngeal obturator for, 358
    - premaxilla positioning appliance for, 355-356, 357
    - presurgical appliances for, 355-362
    - tooth replacement in, 359, 361
  - unoperated, facial growth of adults with, **363-374**
    - abnormalities in, 363
    - lip surgery following, 364-372
    - mandible in, 369
    - maxilla in, 364-369
    - maxillary and mandibular dentition in, 369-373
    - maxillo-mandibular relationship in, 369
    - orthodontic treatment in, 363
    - palatal surgery following, 367-369
- Cleft lip, and cleft palate, and alveolar clefts, nasolabial molding in, **151-160**
  - distraction osteogenesis for, **293-304**
    - distraction protocol for, 295, 296
    - results of, 295-302
    - surgical technique in, 295-295
  - embryology and genetics of, current concepts in, **125-140**
  - in 2- to 5-year-old children, treatment of, 350-351
  - in adolescents, treatment of, 352-353
  - in school-aged child, learning issues in, 352
    - treatment of, 351-352
  - midface deficiency in, 293
  - parental adjustment to, 349
  - preoperative orthodontics in, 293
  - psychological issues in, **349-354**
  - repair of, residual deformities after, **333-347**
  - treatment issues in, 349-353
- bilateral, **211-223**
  - asymmetric, repair of, 218
  - binderoid, repair of, 218-219
  - nasal deformity in, primary repair of, 212-213
  - periodic assessment in, 219-222
  - preoperative dentofacial orthopedics in, 213-214
  - repair of, historical perspective on, 211-212
  - symmetric incomplete, repair of, 217-218
  - synchronous repair of, 214-217
    - with intact secondary palate, repair of, 217
  - complete bilateral, and cleft palate, 186-191
  - minimal, repair of, 183
  - with alveolar cleft, repair of, 182-183
- Cleft lip-nose, unilateral, 194
  - distraction osteogenesis in, 196-197
  - lip adhesion in, 195
  - lip repair in, 197
  - long-term outcome of, **193-210**
  - muscle reconstruction in, 197-198
  - nasal deformity in, 194-195
  - presurgical nasolabial orthopedic molding in, 196
  - surgical correction of lip and nose in, 198-207
  - surgical errors and pitfalls in, 197
  - surgical orthopedics and abnormal skeletal base in, 195-196
  - surgical technique in, 197

- Cleft-orthognathic surgery, **317-332**  
controversies concerning, 325-329  
distraction osteogenesis and, 328-329  
historical perspective on, 320  
integrated team approach to, 317  
modified LeFort I, 325  
orthodontics and, 326-328  
prosthetic options in, 325-326  
residual deformities following, 320  
results of, 320-325  
timing of, 317-320, 329  
velopharyngeal dysfunction and, 326
- Cleft palate. See also *Cleft lip, and cleft palate*.  
alveolar clefts, and cleft lip, nasoalveolar molding in, **151-160**  
anatomy of nose, lips, and palate and, 236-237  
and complete bilateral cleft lip, 186-191  
classification of, 238  
complete bilateral, repair of, 241-242  
incidence of, 235  
incomplete, repair of, 238-240  
repair of, art and issues in, **235-245**  
complications of, 244  
operative and postoperative patient management in, 243-244  
operative techniques for, 238-243  
timing of, 243  
speech in, anatomic evaluation of, 254-255  
before and after palatal surgery, 253  
early evaluations of, 253  
evaluation of, **253-262**  
case history in, 253  
patient and parent education and, 254  
physiologic evaluation of, 255-257, 258, 259, 260, 261, 262  
recommendations for, 257-262  
velopharyngeal function for, evaluation of, 254  
submucous, repair of, 242-243  
syndromes associated with, 235-236  
variations of, 133
- Cobalamin deficiency, following Roux-en-Y gastric bypass, 606
- Cochal bowl rotation, 90
- Conchal cartilage, for structural support in nasal reconstruction, 96-97
- Conchal cartilage graft, in subtotal defect of ala, 101-102
- "Coronal ring" synostosis, 415
- Coronal synostosis, bilateral, without midface retrusion, 475  
helmets for postoperative patients in, 483-484, 486  
unilateral, surgical repair of craniosynostosis in, 431, 440, 441
- Cranial osteotomies, with resorbable fixation using endoscopic approach, **429-442**
- Cranial reconstruction, calcium phosphate bone cements in, 424-426
- Cranial vault, total, reconstruction for, in treatment of sagittal synostosis, 489
- Craniectomy, strip, in sagittal synostosis, 489  
in treatment of sagittal synostosis, 489, 490
- Craniofacial development, 128, 130-131
- Craniofacial distraction, resorbable, 402, 403-404
- Craniofacial fractures, pediatric, age distribution of, 501  
brain growth and, 500-501  
cases reports of, 513-516  
causes of, 499  
epidemiology of, 499  
long-term consequences of, **499-518**, 507-513  
management of, 503-507  
patterns of, 502-503  
and craniofacial growth, 500-502
- Craniofacial reconstruction, biomaterials in, **377-385**  
bone and tissue engineering in, **387-392**
- Craniofacial rehabilitation, in habilitation of cleft patients, 360-362
- Craniofacial surgery, hydroxyapatite cements in, **423-428**  
MacroPore resorbable devices in, **393-406**
- Craniosynostosis, characteristics of, 463  
coronal, endoscopic approach to, **415-422**  
helmet therapy following, 418, 419-420  
results of, 418  
surgical technique for, 416-418  
patient preparation for, 416  
early surgery for, 463  
incidence of, 489  
surgical repair of, efficacy of, assessment of, 429-430  
history of, 429  
in metopic synostosis, 430-431, 438, 439  
in sagittal synostosis, 430, 433-434, 435, 436  
in unilateral coronal synostosis, 431, 440, 441  
methods of, 430-431  
minimally invasive, 430

- surgical techniques for, 430, 432, 433, 434, 435
  - surgical treatment of, helmets following. See *Helmet(s), postsurgical.*
  - history of, 415
  - treatment of, 463-471
- Cross-finger flap, reverse, for nail bed defects, 115, 116
- Crouzon syndrome, craniofacial distraction in, 402, 403-404
- midface hypoplasia in, 410-411
  - midface retrusion and orbito-frontal deformity and oxycephaly in, 476-478
  - osteotomy in, 464, 465
  - "true monoblock" in, 465-469, 471

## D

- Deformities, following repair of cleft lip and cleft palate, repair of, 333-347
- Dehiscence, following circumferential belt lipectomy, 622
- Dentition, maxillary and mandibular, in unoperated clefts, 369-373
- Dermatofibrosarcoma, free flaps for reconstruction of large skin defects in, 41, 42
- Diabetes mellitus, gastric bypass, and body contouring, 603
- Distraction devices, clinical examples and technique of, 410-414
- Distraction osteogenesis, and cleft-orthognathic surgery, 328-329
- for cleft lip and cleft palate, 293-304
  - in mandible, 463
  - in mandibular hypoplasias, 443
  - benefits of, 443
  - history of, 443
  - in Pierre Robin neonates with airway obstruction, 225-233
  - in unilateral cleft lip-nose, 196-197
- Dumping syndrome, 597-598

## E

- Ear, cancer resection of, 89
- reconstruction of, 89-93
  - skin and cartilage of, reconstruction of, autogenous cartilage for, 92
  - posterior mastoid skin for, 92
  - resection of, 90-92

- skin of, resection of, 90
- structure of, 89-90
- total reconstruction of, Medpor implant in, 93
- temporal parietal fascia flap for, 92, 93

Embryonic development, signaling and growth factors in, 125-144

Endoscopy, for approach to coronal craniosynostosis, 415-422

- resorbable fixation using, for fronto-orbital and cranial osteotomies, 429-442

Eyelid, inferior, defects of, reconstruction of, 60-70

- reconstruction of, after ablation of skin cancer, 49-70
- skin cancer of, anatomic considerations in, 50, 51

## F

- Face, growth of, in adults, unoperated clefts and, 363-374
- H-zone of, 35
  - skin cancer of, radiation therapy for, 33-38
- Facial clefts, documentation and record keeping in, three-dimensional technology for, 141-149
- calculations and statistical analysis in, 145
  - discussion of, 136-137
  - materials and methods for, 142-145
  - results of, 145-146
- Facial contouring, hydroxyapatite implants for, 427
- Fascia flap, temporal parietal, for total reconstruction of ear, 92, 93
- Fat compartment, intra-abdominal submuscular, male abdominoplasty and, 568
- Female patient, and male patient, soft tissue differences of, in abdomen, 555, 556
- Fingers, dorsal, defects of, closure options for, 115-116
- Fingertip, defect of, reconstructive options for, 115
- Fistulas, palatal, in failure of palatoplasty in cleft repair, 339-342
- Fluid monitoring, following body contouring, 607
- Folate deficiency, following Roux-en-Y gastric bypass, 606-607
- Forearm, and hand, reconstruction after skin cancer ablation, 113-119
- defect of, after cancer excision, closure of, 117-118



distal, reconstruction using forearm flap, 116, 117  
 dorsal, "hurricane" flap for closure of defect of, 117, 118

Forearm flap, for reconstruction of distal forearm, 116, 117  
 radial, for dorsal hand reconstruction, 116, 117

Forehead, defects of, following Mohs' surgery, aesthetic nasal reconstruction in, 106-107

Forehead flap, for delayed reconstruction following surgery for recurrent cancer, 111, 112  
 in aesthetic reconstruction following Mohs' surgery, 106-107, 109, 111  
 paramedian, for aesthetic reconstruction of nose, 142-143  
 for nasal skin replacement, 98-99  
 in full-thickness defect of nasal tip and ala, 105, 106  
 three-stage, for nasal skin replacement, 99

Fractures, craniofacial. See *Craniofacial fractures*.

Free flaps, reconstruction of large skin defects with, 39-48

Frontal sinus, obliteration of, hydroxyapatite cements in, 426-427

Fronto-orbital osteotomies, with resorbable fixation using endoscopic approach, 429-442

## G

Gastric banding, laparoscopic adjustable, mechanism of action of, 594  
 method of, 594  
 results of, 594-595  
 vomiting following, 605

Gastric bypass, diabetes mellitus, and body contouring, 603  
 obstructive sleep apnea and, 603

Gastroesophageal reflux disease, in obesity, gastric bypass and, 604

Gastroplasty, vertical banded, mechanism of action of, 593  
 method of, 593-594  
 results of, 594

Genes, early expression and development, signaling molecules and, 125-127  
 layer differentiation, neurulation, and midline malformations and, 127-128  
 single, in etiology of orofacial clefting, 135-136

Genetic etiologies, of orofacial clefting, 134-137

## H

Hand, and forearm, reconstruction after skin cancer ablation, 113-119

dorsal, defect of, reconstructive options for, 116-117

reconstruction of, radial forearm flap for, 116, 117

reconstruction of, transposition flaps for, 114

Hard Tissue Replacement, for craniofacial reconstruction, 378

Head and neck, tumors of, Mohs' micrographic surgery in, 13, 15, 16, 18

Helmet(s), polyethylene, following surgical management of coronal craniosynostosis, 418, 419-420

postsurgical, in coronal synostosis, 483-484, 486  
 in craniosynostosis, complications of, 485-486

design and care of, 481-487

fabrication of, 482-485

health risks associated with, 485

instructions to parents in, 485

results of use of, 486

treatment principles for, 481-482

in lambdoid synostosis, 484-485

in metopic synostosis, 484

in sagittal synostosis, 483, 486

Hemifacial microsomia, mandibular distraction in, 444-453, 454

Hernias, abdominal wall, after weight loss surgery, management of, 602

Hips, waist and, following massive weight loss, 611-612, 614

Hydroxyapatite, cement paste form of, 379

ceramic forms of, 379, 423

for craniofacial reconstruction, 378-380

nonceramic form of, 423

porous granular, 379-380

Hydroxyapatite cements, in craniofacial surgery, 423-428

in frontal sinus obliteration, 426-427

Hydroxyapatite implants, bone ingrowth and, 423-424

for facial contouring, 427

infection and, 424

Hypoplasia(s), mandibular, distraction osteogenesis in, 443

midface, bone advancement in, 464-471

in Crouzon disease, 410-411

- Hypoventilation syndrome, obesity, description of, 603  
gastric bypass surgery and, 603-604

---

**I**

- Iliac crest, reconstruction of, with resorbable protective sheets, 394
- Implants, MacroPore FRP, 398  
MacroPore PLDLA, 397-398  
metallic, clinical benefits of resorbable polymers over, 394
- Infant device, mandibular, 410
- Infection, hydroxyapatite implants and, 424  
methyl methacrylate and, 378
- Interosseous flap, posterior, for forearm reconstruction, 117
- Iron deficiency, following Roux-en-Y gastric bypass, 606
- Island flaps, for nail bed defects, 115, 116

---

**L**

- Lambdoid synostosis, helmets for postoperative patients in, 484-485
- Latissimus flap, for coverage of upper extremity, 114
- Lip(s), anatomy of, cleft palate and, 236-237  
cleft. See *Cleft lip*.  
repair of, mucocutaneous deformities associated with, 334-335  
residual deformities of, after repair of cleft and palate, 334  
correction of, after cleft repair, 334-338  
scars of, revision of, after cleft repair, 334  
surgery of, following unoperated clefts, 364-372, 367  
upper, long, following cleft repair, management of, 335-337  
short, following cleft repair, treatment of, 338, 339  
tight, following cleft repair, management of, 337-338
- Lipectomy, circumferential belt, 613-616  
complications associated with, 621-623  
contraindications to, 617  
expected results of, 620-621  
in massive weight loss, to near ideal body weight, 615, 621  
with intermediate weight improvement, 621  
with remaining obesity, 620  
markings for, 616, 617-618  
postoperative care following, 619-620  
preoperative work-up for, 616-617  
surgical technique for, 618  
details of, 618-619  
suction, in excess abdominal adipose tissue, 580  
suction-assisted (Type I), indications for, 559-560
- Lipoplasty, and abdominoplasty, based on anatomy, 540-548  
overlap of, 539-553  
technique of, 548-552  
superwet, 572
- Liposculpture, superficial. See *Abdominoplasty; Lipoplasty*.
- Liposuction, 523, 531, 539  
abdominal, in male patient, 555  
presentation and markings for, 556, 557  
and mini-abdominoplasty, for body contouring with minimal scars, 571-581  
extensive, panniculectomy with, 565-566  
for abdominoplasty, 583  
in females, procedures for, 559  
in males, procedures for, 560  
Subtype 1a extended, and Type I liposuction, indications for, 559-560  
power-assisted, 561  
technique of, 560-561  
Type I, and Subtype 1a extended liposuction, indications for, 559-560  
power-assisted, 561  
technique of, 560-561
- Lip(s), anatomy and function of, 71-72  
lower, aesthetic units of, 71-72  
skin defects of, reconstruction of, 81-84  
reconstruction of, after ablation for skin malignancies, 71-87  
using anatomy to plan, 72-73  
skin defects of, reconstruction of, 72, 73  
upper, aesthetic units of, 71  
full-thickness resection of, 78, 79, 80-81  
skin defects of, reconstruction of, 72, 73-80
- Lung disease, restrictive, following circumferential belt lipectomy, 623

---

**M**

- MacroPore biodegradable tacks, 401-403
- MacroPore FRP implants, 398
- MacroPore mesh, side table assembly using, 399



- MacroPore PLDLA implants, 397-398
- MacroPore resorbable devices, in craniofacial surgery, 393-406
- MacroPore sheets, 401-403
- Magnetic resonance imaging, of resorbable polymers, 394-395
- Male patient, abdominal liposuction in, 555  
    presentation and markings for, 556, 557  
    abdominoplasty in. See *Abdominoplasty, male*.  
    adipose tissue of, 556  
    anatomy of, and concerns of, 555-557  
    and female patient, soft tissue differences of, in abdomen, 555, 556  
    muscle layer of abdomen of, 557  
    skin of, 556
- Mandible, dentition of, in unoperated clefts, 369-373  
    distraction osteogenesis of, 463  
    in unoperated clefts, 369
- Mandibular distraction, clinical applications of, 444-455  
    in hemifacial microsomia, 444-453, 454  
    in micrognathias, 453-454, 455, 456-457, 458  
    in temporomandibular joint ankylosis, 454-455, 460-461  
    surgical refinements and long-term results of, 443-462
- Mandibular distractor, internal resorbable, 404
- Mandibular hypoplasias, distraction osteogenesis in, 443
- Mandibular infant device, 410
- Mandibular pediatric device, 410
- Marking clamp, 527, 531
- "Marriage" abdominoplasty. See *Abdominoplasty, "marriage"*.
- Matrix, for bone and tissue engineering, 390-391
- Maxilla, dentition of, in unoperated clefts, 369-373  
    hypoplastic cleft, surgical correction of, 293  
    in unoperated clefts, 364-369  
    osteotomies of, in treatment of alveolar clefts, 311
- Maxillo-mandibular relationship, in unoperated clefts, 369
- Medications, use of, by post-bariatric-surgery patients, 604
- Medpor, for craniofacial reconstruction, 380-381
- Medpor implant, for total reconstruction of ear, 93
- Metallic implants, clinical benefits of resorbable polymers over, 394
- Methyl methacrylate, for craniofacial reconstruction, 378  
    infection and, 378
- Metopic synostosis, helmets for postoperative patients in, 484  
    surgical repair of craniosynostosis in, 430-431, 438, 439
- Micrognathia(s), mandibular distraction in, 453-454, 455, 456-457, 458
- Midface distraction, surgical technique of, 463-471  
    to "true monoblock," 463-479
- Mini-abdominoplasty, and liposuction, for body contouring with minimal scars, 571-581
- Mohs' defect, management of, 19-22, 23
- Mohs' micrographic surgery, aesthetic reconstruction following, cartilage graft for, 106-107  
    cheek flaps for, 109, 111  
    chondromucoperichondrial flap for, 110, 111-112  
    forehead flap for, 106-107, 109, 111  
    nasolabial flap for, 106-107  
    scalp flap for, 106-107  
    defects of forehead, nasal tip, ala and sidewall following, aesthetic nasal reconstruction in, 106-107  
    defects of nose and cheek following, aesthetic reconstruction in, 109, 111  
    healed wound following, delayed reconstruction of, 107, 108  
    in basal cell carcinoma, 5, 9, 10, 11, 12, 13  
    in large and deeply invasive skin cancer, 8  
    in melanoma, 19  
    in recurrent skin cancer, 8  
    in skin cancer management, advantages of, 5  
        and disadvantages of, 6-8, 9  
        and management of surgical defect, 5-31  
        "bread-loafing" of specimen in, 5, 6  
        cure rates for, 5  
        indications for, 8-18  
        stages of, 7-8  
    in tumors arising in scars, 17  
    in tumors of head and neck, 13, 15, 16, 18  
    in tumors of periorcular area, 14, 16, 17  
    limitations of, 25-29  
    modification of, 1-4  
    of nasal dorsum, aesthetic reconstruction following, 110, 111-112  
    perineural tumor spread, 15-16, 18  
    tumors amenable to, 18-19

- Monoblock, "true", in Crouzon disease, 465-469, 471  
    midface distraction to, **463-479**
- Mons pubis ptosis, following circumferential belt lipectomy, 623
- Mouth, anatomy of, 163
- Mucosal flap, bipedicle, in full-thickness defect of nasal tip and ala, 105, 106
- Muscle(s), for reconstruction of large skin defects, 41-42  
    of abdomen of male patient, 557
- Muscular deformities, after repair of clefts, 335
- Musculocutaneous flaps, for reconstruction of large skin defects, 41-42

---

**N**

- Nail bed, defect of, reconstructive options for, 115, 116
- Nasal dorsum, Mohs' surgery of, aesthetic reconstruction following, 110, 111-112
- Nasoalveolar molding, benefits of, 157-159  
    complications of, 157  
    history of, 151-153  
    in clefts of lip, alveolus, and palate, **151-160**  
    objectives of, 153  
    procedure for, 153-157
- Nasolabial flap, for aesthetic reconstruction of nose, 142  
    in aesthetic reconstruction following Mohs' surgery, 106-107  
    superiorly based, for reconstruction of alar subunit, 98
- Neonates, with clefts, orthodontic treatment in, 275
- Neural crest cell formation, migration, and differentiation, 128, 129
- Nose, aesthetic reconstruction of, case studies illustrating, 102-112  
    following skin cancer, **95-112**  
    formulation of plan for, 99-100  
    scarring and edema and, 100  
    secondary, in recurrent cancer, 100-102  
    skin cover in, 99-100  
    structural support for, 96-97  
    visualization of nasal subunits in, 100  
    anatomy of, 163  
    cleft palate and, 236-237

- defect(s) of, evaluation of, 95  
    following Mohs' surgery, aesthetic reconstruction in, 109, 111
- deformities of, following cleft repair, correction of, 342, 343-344  
    surgical techniques for, 342-345
- lining of, replacement of, 95-96
- obstruction of, following cleft repair, correction of, 342-344, 345-346
- sidewall defects of, following Mohs' surgery, aesthetic nasal reconstruction in, 106-107
- skin cancer(s) of, postexcision radiation in, 100  
    recurrent, delayed reconstruction of heminasal defect following, 111, 112
- structural support of, for aesthetic reconstruction, 96-97  
    skin cover for, for aesthetic reconstruction, 97-100
- tip of, and ala, full-thickness defect of, bipedicle mucosal flap in, 105, 106  
    paramedian forehead flap in, 105, 106  
    defects following Mohs' surgery, aesthetic nasal reconstruction in, 106-107
- total tip defect of, delayed reconstruction in, 107, 108

Nova Bone, for craniofacial reconstruction, 381-382

---

**O**

- Obesity, as risk factor for deep vein thrombosis, 604  
    cardiac disease in, assessment for gastric bypass procedures, 603  
    comorbidities related to, 591, 592-593  
    definition of, 591, 601  
    morbid, bariatric surgery for weight loss in, **591-600**  
        efficacy of, 593  
        surgery in, preoperative screening for, 591-593
- Obesity hypoventilation syndrome, description of, 603  
    gastric bypass surgery and, 603-604
- Omentum, free flaps of, for reconstruction of large skin defects, 41
- Oral commissure, massive defects of, management of, 84-85, 86
- Orbital frontal device, midface, 409
- Orbito-frontal deformity, in Crouzon syndrome, 476-478
- Orofacial clefting, and chromosomal anomalies, 135  
    genetic etiologies of, 134-137  
    nonsyndromic, genetic etiologies of, 136-137

of primary palate, 132-133  
 of secondary palate, 134  
 single gene, etiologies of, 135-136

Orthodontic management, and cleft-orthognathic surgery, 326-328  
 clefts in adolescents and adults, 278-283,  
 283-284, 285-286, 287-289  
 for patients with clefts, **273-292**  
 in alveolar clefts, 308  
 in unoperated clefts, 363

Osteogenesis, distraction. See  
*Distraction osteogenesis.*  
 in mandible, 463  
 in mandibular hypoplasias, 443  
 benefits of, 443  
 history of, 443

Osteotomy(ies), circumferential monocortical  
 mandibular, 412, 413  
 fronto-orbital and cranial, with resorbable fixation  
 using endoscopic approach, **429-442**  
 in Crouzon disease, 464, 465  
 maxillary, in alveolar clefts, 311

Oxycephaly, in Crouzon syndrome, 476-478

## P

Palate, anatomy of, and cleft pathology, 236-238  
 cleft palate and, 236-237  
 cleft. See *Cleft palate.*  
 hard and soft, incomplete cleft of, repair of, 240  
 normal, anatomy of, 236-237  
 primary, orofacial clefting of, 132-133  
 secondary, orofacial clefting of, 134  
 soft, incomplete cleft of, repair of, 238-240  
 surgery of, following unoperated clefts,  
 367-369

Palatogenesis, primary, normal, 128-132  
 secondary, normal, 133-134

Palatoplasty, failures of, in cleft repair, 338-339  
 palatal fistula formation as, 339-340  
 repair in, 340-342  
 Von Lagenbeck, in incomplete cleft palate, 240

z-Palatoplasty, Furlow double-opposing, Children's  
 Hospital of Philadelphia modification of,  
**247-252**  
 design of incisions for, 248  
 mucoperiosteal flaps for, 248-249  
 nasality following, 250, 251  
 results of, 249-251

secondary surgery following, 251  
 speech outcomes in, 249  
 velopharyngeal function following,  
 250-251

Pannilectomy, following massive weight loss, 616  
 with extensive liposuction, 565-566

Parents, adjustment of, to child with cleft lip and  
 cleft palate, 349

Pediatric device, mandibular, 410

Pedicled flap(s), distant, for coverage of upper  
 extremity, 114, 118

Pelvic tilt, aged, abdominoplasty and, 524, 526

Perforator flaps, for reconstruction of large skin  
 defects, 42-46

Perineural tumor spread, Mohs' micrographic surgery  
 in, 15-17, 18

Periocular area, tumors of, Mohs' micrographic  
 surgery in, 14, 16, 17

Pierre Robin neonates, with airway obstruction,  
 distraction in, selection criteria for, 227-228  
 distraction osteogenesis in, **225-233**  
 results of, 231-232  
 distractor management protocol for, 228-231  
 measurements of, 228  
 selectional protocol for, 227

Polyethylene, porous, for craniofacial reconstruction,  
 380-381

Polyglycolic acid, 393  
 versus polylactic acid, 394

Polylactic acid, 393, 394  
 biocompatibility of, 395-396  
 compatibility with dura, spinal cord, and brain and  
 nerve cells, 395-396  
 versus polyglycolic acid, 394

Polymers, resorbable. See *Resorbable polymers.*

Post-gastric-bypass patient, presenting for body  
 contouring, perioperative management of,  
**601-610**

Prosthetic habilitation, of cleft patients. See *Cleft(s),  
 prosthetic habilitation of patients with.*

Protein-calorie malnutrition, and Roux-en-Y gastric  
 bypass, 606

Psychiatric difficulties, following circumferential belt  
 lipectomy, 623

Psychological issues, in child with cleft lip and cleft  
 palate, **349-354**

Psychosocial issues, body contouring and, 603  
Pulmonary mechanics, assessment of, for gastric bypass surgery, 604

## R

Radiation therapy, as adjunctive treatment option for skin cancer, 114  
for facial skin cancers, **33-38**  
postexcision, in nasal skin cancers, 100

Radiobiology, 33

Radiotherapeutic techniques, 33-34

Rectus abdominus flap, for coverage of upper extremity, 114

Rectus muscle fascia, infraumbilical, vertical plication of, in "marriage" abdominoplasty, 576

"Replamineform" implants, 423

Resorbable bone distraction, current status and future directions in, **407-414**

Resorbable bone distraction devices, 408-409

Resorbable materials, in bone distraction, 407-408

Resorbable polymers, 393-394  
biomechanical properties of, 396-397  
clinical applications of, 397-404  
clinical benefits of, over metallic implants, 394  
faster resorbing, in vivo degradation of, resorbable polymers and, 396, 397  
heating and bending studies of, 396  
in vivo degradation of, 396-397  
in vivo degradation of faster resorbing polymer material, 396, 397  
MR imaging of, 394-395  
protective sheet strength and, 396  
resorbable protective sheets, iliac crest reconstruction with, 394

Retromicrognathia, and airway compromise, distraction in, 411-412, 413

Roux-en-Y gastric bypass, 605  
laparoscopic, 597  
mechanism of action of, 596-597  
micronutrient deficiencies following, 606  
protein-calorie malnutrition and, 606  
results of, 597-598  
vomiting following, 605

## S

Sagittal synostosis, complete, treatment of, 492-494  
correction of, using modified II method, **489-498**  
diagnosis of, 490, 491

helmets for postoperative patients in, 483, 486  
incidence of, 489  
natural history of, 491-492  
surgical repair of craniosynostosis in, 430, 433-434, 435, 436  
terminology associated with, 490-491  
treatment of, calvarial remodeling in, 490, 491  
operative technique for, 492-494  
results of, 494-497  
strip craniectomy in, 489, 490  
total cranial vault reconstruction for, 489

Scaffold, for bone and tissue engineering, 390

Scalp flap, in aesthetic reconstruction following Mohs' surgery, 106-107

Scars, tumors arising in, Mohs' micrographic surgery in, 17

Septal cartilage, for structural support in nasal reconstruction, 96

Seromas, following circumferential belt lipectomy, 621-622

Sheets, MacroPore, 401-403

resorbable protective, iliac crest reconstruction with, 394  
strength of, resorbable polymers and, 396

Signaling molecules, and early gene expression and development, 125-127

Skin, abdominal, of male patient, 556  
for nasal covering, for aesthetic reconstruction, 97-100  
posterior mastoid, for reconstruction of skin and cartilage of ear, 92

Skin cancer(s), ablation of, cheek and inferior eyelid reconstruction after, **49-70**  
lip reconstruction after, **71-87**  
aesthetic reconstruction of nose following, **95-112**

etiology and epidemiology of, 49-50  
facial, clinical management of, 34-35  
probability of cure of, tables of, 34  
radiation therapy for, **33-38**  
advantages of, 34-35  
disadvantages of, 35  
outcome data on, 35-36  
postoperative, 36-37

radiotherapeutic techniques in, 33-34  
large and deeply invasive, Mohs' micrographic surgery in, 13

Mohs' micrographic surgery in, and management of surgical defect, **5-31**

multidisciplinary approach to, indications for, 22-25

of cheek, anatomic considerations in, 50  
principles of treatment of, 51-52

of hand and forearm, ablation of, reconstruction after, 113-119

of inferior eyelid, anatomic considerations in, 50, 51

of nose, postexcision radiation in, 100  
recurrent, delayed reconstruction of heminasal defect following, 111, 112  
recurrent, Mohs' micrographic surgery in, 8

Skin defects, large, reconstruction of, using muscle or musculocutaneous flaps, 41-42  
    using perforator flaps, 42-46  
        anterolateral thigh, 45-46  
        deep inferior epigastric, 43, 44-45  
        immediate flap defatting versus secondary liposuction in, 46-47  
        thoracodorsal artery, 43-46  
    using superficial inferior epigastric artery flap, 46  
    reconstruction with free flaps, advantages and disadvantages of, 40  
    aesthetic and functional considerations in, 39-48  
    in dermatofibrosarcoma, 41, 42  
    omental, 41  
    postoperative management in, 47  
    skin or fasciocutaneous, 40-41

Skin necrosis, following circumferential belt lipectomy, 623

Skin laxity after weight loss, surgery for. See *Body contouring*.

Skull, tumor of, resection of, bone and tissue engineering for reconstruction following, 388-389

Sleep apnea, obstructive, definition of, 603  
    gastric bypass surgery and, 603

Soft tissues, of abdomen, differences in male and female, 555, 556

Speech, in cleft palate, evaluation of, 253-262

Squamous cell cancer, of thumb, reconstruction following, 116, 117

Stem cells, bone and tissue engineering and, 390

"Step-off" deformity, 572, 573

Submuscular fat compartment, intra-abdominal, male abdominoplasty and, 568

Sutures, progressive tension, and flap advancement, in abdominoplasty, 584, 585  
    concept of, 583, 584  
    excision for, in abdominoplasty, 584, 585  
    for body lift abdominoplasty, 588  
    for full abdominoplasty, 587  
    for modified abdominoplasty, 586  
    in abdominoplasty, 583-589  
    in abdominoplasty, 583-589  
        study of, 585-586  
        technique of, 583-585

Synchondroses, craniofacial fractures and, 501-502

Synostosis. See specific types of synostosis.

## T

Tacks, MacroPore biodegradable, 399-403

Temporomandibular joint ankylosis, mandibular distraction in, 454-455, 460-461

Thigh/buttock lifts, with high-lateral-tension abdominoplasty, 529-537  
    complications of, 532-537  
    operative technique for, 530-532  
    patient selection for, 530, 533-537

Thrombosis, deep vein, obesity as risk factor for, 604  
    prophylaxis of, for body contouring, 604-605

Thumb, squamous cell cancer of, reconstruction following, 116, 117

Tissue engineering. See *Bone and tissue engineering*.

Tissue examination, peripheral in-continuity, as modification of Mohs' micrographic surgery, 1-4  
    discussion of, 3-4  
    pathology procedure for, 1-3  
    surgical procedure for, 1

Tissue transfer, free, for coverage of upper extremity, 114

Toddlers, with clefts, orthodontic treatment in, 275

Tooth (teeth), replacement of, in prosthetic habilitation of cleft patients, 359, 361

Transposition flaps, for hand and upper extremity reconstruction, 114

## U

Umbilicoplasty, with high-lateral-tension abdominoplasty, 528

Upper extremity, reconstruction in, antibiotic prophylaxis during, 114  
    cosmetic aspect of, 113  
    distant pedicled flaps for coverage in, 114  
    free tissue transfer for coverage in, 114  
    latissimus flap for coverage in, 114  
    reconstructive concepts for, 114-115  
    rectus abdominus flap for coverage in, 114  
    transposition flaps for, 114

## V

Velopharynx, closure phonemes, correct articulation of, 264-265  
    dysfunction of, algorithm(s) for, 264  
        cleft-orthognathic surgery and, 326  
        evaluation and management of, **263-271**  
        intermittent, speech therapy in, 265  
        intermittent perceptual, 265-266  
        management of, 267  
            history of, 263-264  
        patients at risk for, 265  
        prosthetic management of, 267  
        upper airway assessment for surgical management of, 267-268  
    function of, for speech in cleft palate, evaluation of, 254  
    instrumental evaluation of, 266  
    management of, algorithm(s) for, 264-270  
    determination of, 268-270

status of tonsils and adenoids for surgical management of, 268

Vermilion, poor alignment of, after repair of clefts, 335

Vitamin B12 deficiency, following Roux-en-Y gastric bypass, 606

## W

Waist, and hips, following massive weight loss, 611-612, 614

Weight loss, in morbidly obese patient, bariatric surgery for, **591-600**  
    efficacy of, 593

    massive, abdomen following, 611, 613  
        back rolls following, 612, 614, 615  
        body contouring in, 611, 613  
        buttocks following, 612-613, 615  
        circumferential belt lipectomy following. See *Lipectomy, circumferential belt*.  
        panniectomy following, 616  
        treatment following, 613-616  
        truncal body contouring surgery in, **611-624**  
            patient presentation and goals for, 611-613  
            waist and hips following, 611-612, 614  
    surgery for, abdominal wall hernias after, management of, 602

Wound complications, prevention of, following body contouring, 607-608



